ITW COPY

Sterne Kessler Goldstein Fox
ATTORNEYS AT LAW

April 11, 2005

WRITER'S DIRECT NUMBER:
(202) 772-8675
INTERNET ADDRESS:
JHELVEY@SKGF.COM

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Attn: Certificate of Correction Branch

Re: U.S. Patent No. 6,812,779 B2; Issued: November 2, 2004
(from Appl. No. 10/665,620; Filed: September 22, 2003)
For: **Biasing Scheme for Low Supply Headroom Applications**
Inventors: Behzad *et al.*
Our Ref: 1875.0990005

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Request for Certificate of Correction Under 37 C.F.R. §§ 1.322;
2. Certificate of Correction (Form PTO/SB/44); and
3. One (1) return postcard.

It is respectfully requested that the attached postcard be stamped with the filing date of these documents and returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

JTH Helvey

Jeffrey T. Helvey
Attorney for Applicants
Registration No. 44,757

JTH/aw

384155.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of:	Confirmation No.: 6564
Behzad *et al.*	Art Unit: 2816
Patent. No.: 6,812,779 B2	Examiner: Zweizig, Jeffery Shawn
Issued: November 2, 2004	Atty. Docket: 1875.0990005
For: **Biasing Scheme for Low Supply Headroom Applications**	

Request for Certificate of Correction Under 37 C.F.R. § 1.322

Attn: Certificate of Correction Branch

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

It is hereby requested that a Certificate of Correction under 37 C.F.R. § 1.322 be issued for the above-captioned United States Patent. This Certificate of Correction is being requested due to mistakes which appear in the printed patent. These mistakes were made by the U.S. Patent and Trademark Office.

Specifically, the printed patent includes the following errors for which a Certificate of Correction is respectfully requested:

1. In the title, please replace "BIASING SCHEME FOR SUPPLY HEADROOM APPLICATIONS" with --BIASING SCHEME FOR LOW SUPPLY HEADROOM APPLICATIONS--. Support for this correction can be found in the originally-filed specification. See also the Assignment filed electronically on September 23, 2004.

2. In claim 7 at column 6, line 11, please replace "sate" with --gate--. Support for this correction can be found in the Amendment and Reply Under 37 C.F.R. § 1.111, filed June 25, 2004, at the top of page 4.

Remarks

The above-noted corrections do not involve such changes in the patent as would constitute new matter or would require reexamination.

A completed Form PTO/SB/44 accompanies this request, with the above-noted corrections printed thereon. Accordingly, a Certificate of Correction is believed proper and issuance thereof is respectfully requested.

The Commissioner is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Jeffrey T. Helvey
Attorney for Patentees
Registration No. 44,757

Date: 4/n/05

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

380203.1

PTO/SB/44 (04-04)
Approved for use through 04/30/2007. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,812,779 B2

DATED : November 2, 2004

INVENTOR(S) : Arya Reza Behzad and Frank Wayne Singor

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the title, replace "Biasing Scheme For Supply Headroom Applications" with --Biasing Scheme For Low Supply Headroom Applications--.

In claim 7 at column 6, line 11, replace "sate" with --gate--.

MAILING ADDRESS OF SENDER:

Sterne, Kessler, Goldstein & Fox P.L.L.C.
1100 New York Avenue, N.W.
Washington, DC 20005-3934

PATENT NO. 6,812,779 B2

No. of additional copies

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Behzad *et al.*

Appl. No.10/665,620

Filed: September 22, 2003

For: **Biasing Scheme for Low Supply Headroom Applications**

Confirmation No.: 6564

Art Unit: 2816

Examiner: Zweizig, Jeffrey S.

Atty. Docket: 1875.0990005

Amendment and Reply Under 37 C.F.R. § 1.111

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

AS FILED COPY

Sir:

In reply to the Office Action dated March 25, 2004, (PTO Prosecution File Wrapper Paper No. 20040315), Applicants submit the following Amendment and Remarks. This Amendment is provided in the following format:

(A) Each section begins on a separate sheet;
(B) Starting on a separate sheet, amendments to the specification by presenting replacement paragraphs marked up to show changes made;
(C) Starting on a separate sheet, a complete listing of all of the claims:
- in ascending order;
- with status identifiers; and
- with markings in the currently amended claims;

(D) Starting on a separate sheet, the Remarks.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments to the Specification

Please amend the paragraph beginning on page 1, line 6 (under the heading "Cross-Reference to Related Application(s)") as follows:

This application is a continuation of U.S. Patent Application 10/360,810, filed ~~on~~ February 10, 2003 (now U.S. Patent No. 6,667,654), which is a continuation of U.S. Patent Application No. 10/127,752, filed April 23, 2002 (now U.S. Patent No. 6,531,915), which is a continuation of U.S. Patent Application No. 09/712,413, filed November 13, 2000 (now U.S. Patent No. 6,396,335 B1), which claims the benefit of U.S. Provisional Application No. 60/164,988 filed November 11, 1999, all of which are incorporated herein by reference in their entireties.

Amendments to the Claims

1-18. (Canceled).

19. (currently amended) A current mirror circuit, comprising:

a reference current side having a first transistor and a second transistor, a source of said first transistor coupled to a drain of said second transistor; and

a load current side having a third transistor, a gate of said third transistor connected to a gate of said second transistor, a drain of said third transistor connected to a load circuit;

wherein a drain-to-source voltage drop across said second transistor matches a drain-to-source voltage drop across said third transistor;

wherein a voltage is applied to a gate of said first transistor, said voltage based on a common mode voltage associated with an input of said load circuit.

20. (original) The current mirror circuit of claim 19, wherein a reference current in said reference current side tracks changes of a load current in said load current side.

21. (original) The current mirror of claim 20, wherein said reference current is scaled relative to said load current.

22. (original) A current mirror circuit, comprising:

a reference current side having a first transistor and a second transistor, a source of said first transistor coupled to a drain of said second transistor; and

a load current side having a third transistor, a gate of said third transistor connected to a gate of said second transistor, a drain of said third transistor connected to a load circuit;

wherein said load current side supplies a load current to said load circuit, and said reference current side generates a reference current that is proportional to said load current so that said reference current tracks changes in said load current;

wherein a voltage is applied to a gate of said first transistor, said voltage based on a common mode voltage associated with an input of said load circuit.

23. (original) A method for maintaining a current ratio in a current mirror circuit, the current mirror having a reference current side with a first transistor coupled to a second transistor, and a load current side having a third transistor with a gate connected to a gate of the second transistor, comprising:

generating a reference current in the reference current side;

generating a load current in the load current side that is proportional to the reference current generated in the reference current side; [[and]]

causing a drain-to-source voltage drop across said second transistor to match a drain-to-source voltage drop across said third transistor so that said reference current tracks changes in said load current;

applying a voltage to a gate of said first transistor, wherein said voltage is based on a common mode voltage associated with an input of said load circuit .

24. (new) The current mirror of claim 19, wherein said source of said first transistor is coupled to said drain of said second transistor though a resistor.

25. (new) The current mirror of claim 24, wherein said resistor is determined based on an impedance of said load circuit.

26. (new) The current mirror of claim 19, wherein said load circuit includes a differential input having said common mode voltage that is an average of said differential input.

27. (new) The current mirror of claim 22, wherein said source of said first transistor is coupled to said drain of said second transistor though a resistor.

28. (new) The current mirror of claim 27, wherein said resistor is determined based on an impedance of said load circuit.

29. (new) The current mirror of claim 22, wherein said load circuit includes a differential input having said common mode voltage that is an average of said differential input.

Remarks

Upon entry of the foregoing amendment, claims 19-29 are pending in the application, with 19, 22, and 23 being the independent claims. The specification has been amended to update the priority statement. Claims 19, 22, and 23 are sought to be amended, and new claims 24-29 are sought to be added. Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

Claims 19-23 were rejected as being anticipated by U.S. Patent No. 5,252,910 to Agaesse (hereinafter Agaesse). Applicants respectfully traverse this rejection. Independent claim 19, as amended, recites:

> A current mirror circuit, comprising:
> a reference current side having a first transistor and a second transistor, a source of said first transistor coupled to a drain of said second transistor; and
> a load current side having a third transistor, a gate of said third transistor connected to a gate of said second transistor, a drain of said third transistor connected to a load circuit;
> wherein a drain to source voltage drop across said second transistor matches a drain to source voltage drop across said third transistor;
> *wherein a voltage is applied to a gate of said first transistor, said voltage based on a common mode voltage associated with an input of said load circuit.*

Agaesse describes a current mirror that includes a reference branch and an output branch. A feedback circuit causes a first transistor of the reference branch to track the voltage of a second transistor of the output branch. However, Agaesse fails to teach or suggest applying a voltage to a gate of the first transistor, the voltage based on a common mode voltage associated with an input of the load circuit. U.S. Patent No. 5,359,296 to Brooks et al. (hereinafter Brooks) and U.S. Patent No. 5,835,994 to Adams (hereinafter Adams) also fail to teach this feature.

Independent claims 22 and 23, both as amended, also distinguish over Agaesse, Brooks, and Adams for reasons similar to those set forth above with respect to independent

claim 19, as amended. Accordingly, Applicants request that the rejection under 35 U.S.C. § 102 be removed and that independent claims 19, 22 and 23 and their respective dependent claims be passed to allowance.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Jeffrey T. Helvey
Agent for Applicants
Registration No. 44,757

Date: 6/25/04

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600